

**26 Advisory and Assistance Services (A&AS) Support  
Geospatial and Signatures Intelligence (GS)**

**For the  
National Air & Space Intelligence Center (NASIC)  
Wright-Patterson AFB, OH 45433-5648**

**GSA BPA #ID05170100**

**TASK ASSIGNMENT GUIDE – TAG 047  
6 August 2019**

**REQUIRING AGENCY:** NASIC/GSMP

**1.0 TITLE:** MASINT Artificial Intelligence and Machine Language (AI/ML) Implementation

**2.0 TECHNICAL AREA:** SOW paragraph 6.4.4.

**3.0 SCOPE/OBJECTIVE:** The goal of this effort is to provide independent technical and management Advisory and Assistance Services (A&AS) support in the area of Measurement and Signature Intelligence (MASINT) activities at the NASIC facility as well as across the intelligence community. The objective of this effort is to build prototypes to demonstrate feasibility of outlined tasks within the “MASINT AI/ML Implementation Plan,” dated 31 May 2019. The contractor shall procure a high-end workstation (e.g., a Lambda) and supporting software to support this effort.

**4.0 CONTRACTOR REQUIREMENTS:** The contractor shall provide a contract program manager to provide total task management and supervise contractor personnel. The contract program manager shall serve as the primary point of contact to the Government Client Representative (CR) and/or Alternate Client Representative (ACR) for all technical aspects of the required work. The Government will neither supervise contractor employees nor control the method by which the contractor performs the required tasks. Under no circumstances shall the Government assign tasks to, or prepare work schedules for, individual contractor employees. It shall be the responsibility of the contractor to manage its employees and to guard against any actions that are of the nature of personal services, or give the perception of personal services. If the contractor feels that any actions constitute, or are perceived to constitute personal services, it shall be the contractor’s responsibility to notify the Contracting Officer (CO) immediately. These services shall not be used to perform work of a policy/decision making or management nature, i.e., inherently Governmental functions. All decisions relative to programs supported by the contractor shall be the sole responsibility of the Government. No personal services shall be performed under this contract.

**5.0 APPLICABLE DOCUMENTS:**

**6.0. STATEMENT OF WORK (SOW) REQUIREMENTS**

**6.1. Task 1 - Project Management**

The contractor shall provide all labor, facilities, and non-Government Furnished Equipment (non-GFE) to successfully complete all Operations & Maintenance (O&M) (CLIN0001) and/or Research & Development (R&D) (CLIN0001A) tasks that support the management of GEOINT, PIR, and MASINT activities to include the following:



6.1.1 Create and maintain a Project Management Plan. The Project Management Plan shall describe, as a minimum, the resources necessary to accomplish the PWS. The Project Management Plan shall be completed and certified by the contractor, the CR and/or ACR, and the Contracting Officer (CO) within 30 calendar days after award of the contract. (Ref: Table 7.2 - deliverable 1.)

6.1.2. Provide up-to-date status of the program through monthly status reports, monthly financial reports, and quarterly Program Management Reviews (PMRs). Each report should contain sufficient detail as to describe the status of all directed tasks detailing outstanding actions, a summary chart of the current financial status on all tasks and related travel, and a summary chart addressing any areas of concern or potential problems. (Ref: Table 7.2 - deliverables 2, 3, and 4.)

6.1.3. Maintain a complete listing of classified material issued by the Government and maintained at the contractor's facility in performance of this contract to include, the title of the material; the origination date; the overall classification; the type of material (i.e. report, electronic media, etc.); the number of copies held; and any other information necessary to identify the inventory. Further, the contractor shall obtain written prior approval by the CR and/or ACR prior to the release of classified material. The contractor shall provide the CR and/or ACR with a destruction certificate for classified destroyed. (Ref: Table 7.2 - deliverable 6.)

6.1.4. Prepare written documentation on the results of tasking to include verbal and written comments, informational memorandums and letters, meeting minutes, specialized technical reports and papers, as well as, final report and studies as defined in individual TO. (Ref: Table 7.2 – deliverables 13, 14, and 15.)

6.1.5. Prepare and present briefings on Government selected studies, models, or analyses associated with this effort to various intelligence organizations, committees, or panels as defined in individual TO. The contractor shall prepare and present the briefing to the Government appointed experts 10 calendar days prior to the actual presentation, to ensure content accuracy and that security considerations are properly addressed and followed. (Ref: Table 7.2 – deliverable 16.)

6.1.6. Prepare a continuity report on the overall results for each task order. The continuity report shall include sufficient detail to include (but not limited to) advice, opinions, and overall contractor assessments, determinations and findings made during the period of performance. The report should also include a summary of any deliverables, to include a hardcopy of all reports, briefings, etc. prepared under the effort; a complete list of all reference materials used during the effort, a complete list of all classified material generated during the period of performance, and its disposition; as well as, the status and disposition of government furnished information/equipment. (Ref: Table 7.2 – deliverable 12.)

#### **6.4. Task 4 –MASINT Support (FFP – O&M)**

The contractor shall provide oversight and technical support of relevant processing, exploitation, dissemination and integration of radar and electro-optical data to characterize weapon systems in



support of NASIC, the Intelligence Community (IC) and Department of Defense (DoD). The contractor shall provide ongoing analysis, define, design, and implement the assignment, tracking and execution of analysis and exploitation related to MASINT activities by performing systems engineering, processing, and exploitation support. Activities under this task require support to include O&M (CLIN0004) and/or R&D (CLIN0004A) tasks in the subsections to follow. Deliverables for all activities defined in this section are listed under sections 6.1.4 through 6.1.6.

6.4.4. Provide systems engineering, software engineering and other engineering disciplines as required to provide oversight, tasking, processing, exploitation analysis, and dissemination (TPED) of intelligence in support of MASINT intelligence.

6.4.4.4. The contractor shall outline an opportunity to automate the initial tracing of the vertical ionograms (VIs) with an algorithm that increases accuracy as additional data is processed (Ref OTH-1, Chapter 15 of the MASINT AI/ML Implementation Plan for additional details).

6.4.4.5. The contractor shall automate the initial tracing of the oblique ionograms (OIs) with an algorithm that increases accuracy as additional data is processed (Ref OTH-2, Chapter 16 of the MASINT AI/ML Implementation Plan for additional details).

6.4.4.6. The contractor shall investigate the feasibility of implementing an automatic Data Quality Assessment (DQA) system for the OTH sensor data. (Ref OTH-4, Chapter 18 of the MASINT AI/ML Implementation Plan for additional guidance).

6.4.4.7. The contractor shall implement a physics-based convolutional neural network (CNN) or similar neural network to implement a peak-tracing algorithm, as described in OTH-1, to trace the cepstral Doppler waterfall lines in the plot data and to automatically extract the numerical values corresponding to these lines. (Ref NCTI-2, Chapter 14 of the MASINT AI/ML Implementation Plan for additional guidance).

6.4.4.8. The contractor shall improve an algorithm for wideband (WB) radar (object extraction/imaging) to enable automated estimation of target apparent measurements. (Ref LOS-1, Chapter 10 of the MASINT AI/ML Implementation Plan for additional guidance).

#### **6.4. Task 4a – MASINT Support (FFP - R&D)**

The contractor shall provide oversight and technical support of relevant processing, exploitation, dissemination and integration of radar and electro-optical data to characterize weapon systems in support of NASIC, the Intelligence Community (IC) and Department of Defense (DoD). The contractor shall provide ongoing analysis, define, design, and implement the assignment, tracking and execution of analysis and exploitation related to MASINT activities by performing systems engineering, processing, and exploitation support. Activities under this task require support to include O&M (CLIN0004) and/or R&D (CLIN0004A) tasks in the subsections to follow. Deliverables for all activities defined in this section are listed under sections 6.1.4 through 6.1.6.



6.4.4. Provide systems engineering, software engineering and other engineering disciplines as required to provide oversight, tasking, processing, exploitation analysis, and dissemination (TPED) of intelligence in support of MASINT intelligence.

6.4.4.4. The contractor shall improve existing capabilities to align 3D models of known aircraft with their 2D projections in the corresponding video data to enable automation of Doppler boresight alignment of the radar data with the video data. (Ref NCTI-1, Chapter 13 of the MASINT AI/ML Implementation Plan for additional guidance. Completion of this task is recommended for completion prior to 6.4.4.6 per the MASINT AI/ML Implementation Plan.)

6.4.4.5. The contractor shall incorporate deep learning to automatically sort through the incoming data to determine if relevant activity exists before further analysis occurs. (Ref OTH-3, see Chapter 17 of the MASINT AI/ML Implementation Plan for additional details).

6.4.4.6. The contractor shall improve a pattern-of-life anomaly detection system initially based on narrowband (NB) radar data. (Ref SOI-1, see Chapter 20 of the MASINT AI-ML Implementation Plan for additional guidance).

6.4.4.7. The contractor shall improve the Post Mission Object Tracker (PMOT) with tracking enhancements via automated parameter selection. (Ref LOS-2, see Chapter 11 of the MASINT AI-ML Implementation Plan for additional guidance.)

## 7.0 DELIVERABLES/SCHEDULE

### 7.1. Deliverable Acceptance Criteria – No Changes

**7.2. Schedule** – The Contractor shall submit reports and other deliverables in accordance with the requirements set forth in Table 7.2 below. (NOTE: “days” refers to “calendar” days.)

**TABLE 7.2.**

NO.	TITLE	SOW PARA (S)	TO PARA (S)	POC	DRAFT DUE	FINAL DUE
2	Status Reports	6.1.2.	6.4.4.	CR and/or ACR	N/A	Monthly
3	Financial Reports	6.1.2.	6.4.4.	CR and/or ACR	N/A	Monthly
4	Program Management Reviews (PMRs)	6.1.2.	6.4.4.	CR and/or ACR	N/A	Quarterly
5	Final Invoice and Release of Claims	16.8.	6.4.4.	CR and/or ACR	N/A	120 days after TO end date
6	Classified Holdings – Inventory	6.1.3.	6.4.4.	CR and/or ACR	N/A	Quarterly
7	Government Furnished	10.1.4.	6.4.4.	CR and/or ACR	30 days after contract	Quarterly



	Equipment (GFE) – Inventory				award	
9	SCI Eligibility Package(s)	12.1.2.	6.4.4.	CR and/or ACR	N/A	5 days after contract/TO award
10	Non-Disclosure Agreement (NDA)	9.2.6.	6.4.4.	CR and/or ACR	N/A	5 days after TO award
11	Trip Reports	8.2.5.	6.4.4.	Tech Monitor/POC	N/A	10 days after end of travel
12	Continuity Report	6.1.6.	6.4.4.	CR and/or ACR	N/A	End of TO PoP
13	Reports and Studies	6.1.4.	6.4.4.	Tech Monitor/SME	30 days prior to end of TO POP	10 days prior to end of TO PoP
14	Progress Reports; Informational Papers	6.1.4.	6.4.4.	Tech Monitor/SME	N/A	As required
15	Action items; Meeting Minutes	6.1.4.	6.4.4.	Tech Monitor/SME	N/A	2 days after end of meeting
16	Briefings	6.1.5.	6.4.4.	Tech Monitor/SME	10 days prior to event	5 days prior to event

## 8.0 SERVICE DELIVERY SUMMARY

Performance Objective	TAG Para	Performance Threshold
Reports and Presentations - The contractor shall submit technical reports and presentations	6.4.4.	90% of all deliverables received before or on scheduled due date; 100% within 5 business days of scheduled due date. 90% of all deliverables accepted without requiring a resubmission based on government comments



## **Attachment 1 - ADMINISTRATIVE**

**A.1. PERIOD OF PERFORMANCE:** The period of performance for this task order will be 12 months from the date of award.

**A.2. SECURITY LEVEL OF TASKING REQUIREMENT:** Work related to this task order shall require clearances up to and including Top Secret (TS) security clearance with Sensitive Compartmented Information (SCI) access. The contractor shall both store and process data up to and including Top Secret (TS) security clearance with Sensitive Compartmented Information (SCI) at their facility for the purposes of performing this task.

**A.3. SECURITY CLEARANCES:** The contractor's key personnel must have a valid a Top Secret (TS) security clearance with Sensitive Compartmented Information (SCI) access.

- The Contractor shall do everything possible to ensure continuity of effort by using the same key personnel throughout the period of the contract. However, if an individual leaves the contractor before the contract expires, the contractor must provide the Government with an individual of comparable qualifications, security clearances, and acceptable standards of moral and ethical conduct.

**A.4. KEY PERSONNEL:** Individuals designated as key personnel will be committed to the project for its duration and cannot be substituted or replaced without the written agreement of the Contracting Officer.

**A.5. MANAGEMENT AND TRAINING:** The Contractor shall be responsible for selecting personnel who are well qualified to perform the required services, versed in supervising techniques used in their work, and for keeping personnel informed of all improvements, changes, and methods of operation.

**A.6. INDIVIDUAL QUALIFICATIONS:** The contractor shall submit names, resumes, and security SCI nomination request of each prime and sub-contractor individual proposed to work this delivery order. The personnel must meet any minimum security, experience and educational requirements specified in the Basic Contract and are subject to Government approval. Any exceptions shall be reviewed only on a case-by-case basis in accordance with the Basic Contract by the CR/ACR.

**A.7. IDENTIFICATION OF CONTRACTOR PERSONNEL:** All contractor personnel and their subcontractors must identify themselves as Contractors or subcontractors during meetings, telephone conversations, and in electronic messages, or correspondence related to this contract. Further, all Contractor-occupied facilities (on Wright-Patterson AFB, OH or any other Government installations) such as offices, separate rooms, or cubicles must be clearly identified with Contractor supplied signs, name plates or other identification, showing that these are work areas for Contractor or subcontractor personnel.

**A.8. PLACE OF PERFORMANCE:** Work under this task order will be accomplished primarily at the prime contractor facility 2640 Hibiscus Way, Beavercreek, OH. Minimal work will be performed at the National Air & Space Intelligence Center, 4180 Watson Way, Wright-Patterson AFB OH 45433-5648.

**A.9. ACCESS TO AIR FORCE COMPUTER SYSTEMS:** Performance under this contract will require access to Air Force computer systems (stand alone or networked), compliance with Air Force



Instruction (AFI) 33-119 and Air Force Instruction (AFI) 33-200 is mandatory. It should be noted that such access requires, at a minimum, a National Agency Check or Entrance National Agency Check in accordance with DoD 5200.2-R, Personal Security Program. The contractor must be familiar with local procedures for processing such requirements, and be prepared to be in compliance on the first day of contract performance.

**A.10. TRAVEL REQUIRED:** Travel is not anticipated for this task order. Travel between Wright-Patterson AFB, OH and the local contractor's office, and vice versa, is not a reimbursable cost under this contract.

**A.11. Other Direct Cost (ODC):** The Government CR/ACR or CO will authorize all material purchases. If the cost of the material purchase exceeds \$3,500.00, the Contractor shall either obtain three (3) price quotes or provide supporting documentation that shows the material ODC is reasonable. The Government Representative will approve all purchases. All supporting documentation shall be included with the invoice in GSA Information Technology Solutions Shop (ITSS).

**A.12. GOVERNMENT FURNISHED DATA:** NASIC will provide work space, working supplies, furniture, access to business telephones (for business purposes only) and the computer time as required for work performed on-site at Wright Patterson AFB, OH at no additional cost to the contractor. Any requirements for additional Government Furnished Equipment (GFE) will be stated in each task order. Any GFE issued must be returned at the end of the period of performance.

**13. CLOSE OUT PROCEDURES:** The contractor is required as a deliverable of this contract to provide the GSA Information Technology Manager (ITM) a final invoice and Release of Claims (ref: Table 7.2 - deliverable 5) no later than 120 calendar days after the end of each individual task order period of performance. The CO will subsequently modify the contract for closeout.

**A.14. TASK MANAGER/SUBJECT MATTER EXPERT (SME):**

Government Task Manager (GTM) / Flight: Samuel Robinson/ GSMP; Alternate GTM: Kimberly Miracle / GSMP

Subject Matter Expert (SME) / Flight: Eric Braeden / GSMR

**A.15. PAYMENT:** The contractor shall submit separate invoices for labor, travel, ODCs, and material CLINs. Invoices shall be submitted monthly identifying the task order#, service dates, period of performance, and invoice#.

**A.16. INFORMATION TECHNOLOGY (IT):** All IT solutions to be implemented at NASIC, must conform to and be in compliance with the NASIC Enterprise Architecture as published by the Systems Integration Management Office (SIMO) and approved by the NASIC Chief Information Officer (CIO). Any deviations from the NASIC IT standards will be addressed through the processes outlined in NASICI 33-108. All contractors and personnel requiring accounts with elevated system/network privileges must be trained and certified in accordance with DoD 8570.01-M – Information Assurance Workforce Improvement Program and DFARs 252.239-7001, Information Assurance Contractor Training and Certification Program.

**A.16. GENERAL INFORMATION:** It has been determined that this acquisition does not meet the definition of “Essential Contract Services” as defined in DoDI 3020.37 dated 5 Nov 1990. This instruction is not applicable to this effort.



## Attachment 2 – Instructions

### I. TASK ORDER ADMINISTRATIVE INFORMATION

Title of Effort: MASINT Artificial Intelligence and Machine Language (AI/ML) Implementation  
TO # 047

TIP Due Date: Per GSA Instructions

TIP Technical Proposal Page Limit: 20

Period of Performance: 12 months from date of award

Government Estimate of Hours or Cost: (b) (4)

Government Task Manager (GTM) / Flight: Samuel Robinson/GSMP; Alternate GTM: Kimberly Miracle / GSMP

Subject Matter Expert (SME) / Flight: Eric Braeden / GSMR

NASIC Client Representative (CR): Catherine L. Thomas/XOQ/937-257-1057

GSA Contracting Officer (CO): Clifton Kendrick/GSA/618-206-5218

### II. INSTRUCTION TO OFFERORS

The government intends to award this effort as a (Firm Fixed Price (FFP)) task order.

Any GFE/GFP will be provided as specified in the TAG, Attachment 1, A.12, unless proposed in the TIP and subsequently approved by the Government. All proposed GFE/GFP must be clearly specified in the TIP. Your TIP will be evaluated on the factors described in Section V of this solicitation. Deliver 1 Unclassified softcopy via email to the GSA Contracting POC (benny.reyes@gsa.gov) and the GSA CO, ([clifton.kendrick@gsa.gov](mailto:clifton.kendrick@gsa.gov)). If you have any questions regarding this TIP Solicitation, please contact the GSA CO.

### III. TASKING REQUEST – See attached TAG.

**IV. CLASSIFIED PROPOSAL SUBMISSION** – Technical volume may be classified up to the collateral Secret level. The Offeror must ensure classified volumes are properly labeled and marked, conforming to the DD Form 254 provided in this solicitation. The classified volume may be delivered to NASIC via either one of the following two methods: (1) Hand-carry to NASIC, using proper courier procedures as outlined in DoD M5200.01, Vol 3 (dated 24 Feb 2012), and deliver to NASIC by 4 pm on the proposal due date (recommended). NASIC Point of Contact for deliveries will be Ms. Catherine Thomas, NASIC/XOQ; or (2) Mail classified volumes to NASIC as outlined in DoD M5200.01, Vol 3 (dated 24 Feb 2012). All proposals sent via mail must be received by the due date. The proper mailing address for collateral SECRET is:

NASIC/XOQ  
4180 Watson Way  
Wright-Patterson AFB, OH 45433-5648

Vendors using the mail services must allow adequate time for delivery. The Government is not responsible for late delivery of the proposal. Method 1 above is recommended for delivery of classified material.

**V. EVALUATION FACTORS/CRITERIA:** IAW AF MP5315.304, the TIP will be evaluated in the following areas in descending order of importance: Technical Approach, Management and Staffing Plan and Cost.



### **Technical Approach**

- Does the proposal document with convincing demonstrated evidence the offeror has a technical knowledge and an understanding of the requirements contained within the tasks?
- Does the offeror's proposal demonstrate the offeror has technical expertise and an understanding of Artificial Intelligence and Machine Learning?

### **Management and Staffing Plan**

- Does the proposal include a list of names of personnel proposed, their labor skill category, including special qualifications, the availability of proposed personnel, and an estimated number of hours by labor categories?
- Does the proposal include information detailing proposed teaming/subcontracting arrangements to be used in support of the task requirements and how they will be managed?
- Does the proposal provide resumes of each individual identified/proposed outlining education history; years of relevant work experience, qualifications to include any special training or relevant certifications, current security clearance level, and their overall applicability to the labor category proposed.
- Does the proposal indicate and/or provide evidence of their proposed key management and technical personnel currently having a minimum of TOP SECRET/SCI and the ability to obtain TOP SECRET/SCI access for selected personnel in accordance with Industrial Security Manual (DoD 5220.22M) by contract award?

### **Cost**

- Appropriateness of the distribution of cost per task and subtasks
- Appropriate use of labor categories
- Overall cost